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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,731	01/17/2002	Shiquan Tao	2343-133-27	2499

7590 08/10/2005
Supervisor, Patent Prosecution Services
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EXAMINER

MOONEY, MICHAEL P.

ART UNIT PAPER NUMBER

2883

DATE MAILED: 08/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/046,731

Applicant(s)

TAO ET AL.

Examiner

Michael P. Mooney

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 16, 20, 23 and 24 is/are rejected.
- 7) ☒ Claim(s) 7, 9-15, 17-19, 21, 22 and 25-49 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's arguments regarding the 3/11/05 Office action rejection under Sigel et al. are acknowledged and are persuasive. The 3/11/05 Office action rejection and all other prior arguments are moot in light of the following new grounds of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6, 8, 16 are rejected under 35 U.S.C. 102b as being anticipated by Onorato et al. (4680049).

Onorato et al. teaches a method for making a porous sol-gel fiber (col. 5 lines 30-55), the method comprising steps of: hydrolyzing a silicate ester with water using a catalyst (col. 4 lines 1-15) to form a hydrolyzed solution (col. 5 lines 30-55); transferring the hydrolyzed solution into the cavity of a mold (col. 5 lines 30-55); allowing the hydrolyzed solution to gelatinize to form a sol-gel fiber (col. 5 lines 30-55); removing the sol-gel fiber from the mold; and drying the sol-gel fiber (col. 5 lines 30-55).

Thus claim 1 is met.

By the reasons and references given above Onorato et al. teaches each and every element of each of claims 2-4, 8, 16. Thus claims 2-4, 8, 16 are met.

Onorato et al. teaches wherein the hydrolyzed solution is allowed to gelatinize for at least two days. (col. 5 lines 30-68). Thus claim 6 is met.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 5, 20, 23, 24 are rejected under 35 U.S.C. 103a as being unpatentable over Onorato et al. (4680049).

Onorato et al. teaches a method for making a porous sol-gel fiber (col. 5 lines 30-55), the method comprising steps of: hydrolyzing a silicate ester with water using a catalyst (col. 4 lines 1-15) to form a hydrolyzed solution (col. 5 lines 30-55); transferring the hydrolyzed solution into the cavity of a mold (col. 5 lines 30-55); allowing the hydrolyzed solution to gelatinize to form a sol-gel fiber (col. 5 lines 30-55); removing the sol-gel fiber from the mold; and drying the sol-gel fiber (col. 5 lines 30-55).

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Although Onorato et al. does not explicitly state "wherein the mold cavity is a tubular cavity" it would have been obvious to do so because Onorato et al. does teach an optical fiber (col. 5 lines 40-45) and it is conventional to make optical fibers in a cylindrical shape.

Thus claim 5 is rejected.

Each and every element of claim 20 is rejected by the reasons and references given above in addition to the fact that it is conventional to place a fiber between a light source and a detector. Thus claim 20 is rejected.

Regarding claim 23, the range of 500 micrometers or less is conventional for optical fibers and rod lens fibers. Thus claim 23 is rejected.

Regarding claim 24, optical fiber connector (rod lens fibers) are conventionally in the range of at least 1 mm. Thus claim 24 is rejected.

Allowable Subject Matter

Claims 7, 9-15, 17-19, 21-22, 25-49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art, either alone or in combination, does not disclose or render obvious wherein the sol-gel fiber is removed from the mold by injecting a fluid into the mold in combination with the rest of claim 7.

It is noted that the claim 7 is allowable because the unique combination of each and every specific element stated in the claim.

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The prior art, either alone or in combination, does not disclose or render obvious further comprising a step of incorporating a sensing material into the sol-gel fiber in combination with the rest of claims 9 or 21.


It is noted that the claims 9, 21 are allowable because the unique combination of each and every specific element stated in the claim.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Mooney whose telephone number is 571-272-2422. The examiner can normally be reached during weekdays, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1562.


Michael P. Mooney
Examiner
Art Unit 2883


Frank G. Font
Supervisory Patent Examiner
Art Unit 2883

FGF/mpm
8/8/05